UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

SERIAL NUMBER	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/244,863	08/18/94	BRIDGER	G 204835MBUS11

EXAMINER	
DATLOW, P	
ART UNIT	**PAPER NUMBER**
1202	5

12M2/0502

CUSHMAN DARBY & CUSHMAN
1100 NEW YORK AVENUE
NINTH FLOOR
WASHINGTON DC 20005-3918

DATE MAILED: 05/02/95

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

☑ This application has been examined ☐ Responsive to communication filed on _____ ☐ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), ___ days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

1. ☑ Notice of References Cited by Examiner, PTO-892.
2. ☐ Notice of Draftsman's Patent Drawing Review, PTO-948.
3. ☐ Notice of Art Cited by Applicant, PTO-1449.
4. ☐ Notice of Informal Patent Application, PTO-152.
5. ☐ Information on How to Effect Drawing Changes, PTO-1474.
6. ☐ _____

Part II SUMMARY OF ACTION

1. ☑ Claims 1-17, 19-45 are pending in the application.
   Of the above, claims _____ are withdrawn from consideration.
2. ☐ Claims _____ have been cancelled.
3. ☐ Claims _____ are allowed.
4. ☑ Claims 1-3, 6-17, 19-20, 25-45 are rejected.
5. ☑ Claims 4-5, 21-24 are objected to.
6. ☐ Claims _____ are subject to restriction or election requirement.
7. ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.
8. ☐ Formal drawings are required in response to this Office action.
9. ☐ The corrected or substitute drawings have been received on _____. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).
10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on _____. has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).
11. ☐ The proposed drawing correction, filed _____, has been ☐ approved; ☐ disapproved (see explanation).
12. ☐ Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. _____; filed on _____.
13. ☐ Since this application apppears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
14. ☐ Other

EXAMINER'S ACTION

PTO-

1. This application does not contain an Abstract of the Disclosure as required by 37 C.F.R. § 1.72(b). An Abstract on a separate sheet is required.

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

3. Claims 42-45 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 42, at pg. 53 line 1, the recitation that "R, R' and A' are as defined in claims 1 and 10 respectively" renders the claim indefinite. It is not clear what definitions are intended for what groups, which makes the scope of the claims uncertain.

4. Claim 45 is objected to under 37 C.F.R. § 1.75(c) as being in improper form because a multiple dependent claim cannot depend upon another multiple dependent claim. See M.P.E.P. § 608.01(n).

5. The following is a quotation of the first paragraph of 35 U.S.C. § 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The specification is objected to under 35 U.S.C. § 112, first paragraph, as failing to provide an enabling disclosure. HOW TO MAKE: The specification provides insufficient enabling disclosure by way of representative examples or reasonable disclosure of ultimate starting material sources for the plethora of groups embraced by the broad Z and Y definitions in the claims. The starting material sources necessary to obtain the instant compounds must have been available as of the filing date in order to provide an enabling disclosure. See In re Howarth, 654 F.2d 103, 210 USPQ 689 (CCPA 1981); Ex parte Moersch, 104 USPQ 122 (POBA 1954).

Note that the Z and Y rings in the claims can have 9 to 20 "ring members" and 3 to 6 amine nitrogens in the ring. This embraces a large number of widely divergent ring types having many different types of ring heteroatoms in addition to the specified nitrogen atoms, i.e., oxygen, sulfur, selenium, tellurium, etc.

6. Claims 1-3, 19-20 and 42-45 are rejected under 35 U.S.C. § 112, first paragraph, for the reasons set forth in the objection to the specification.

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or

> on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 19-20 and 28 are rejected under 35 U.S.C. § 102(b) as being anticipated by Ciampolini et al. See Formulas 5-6 at pg. 3527 and the dimetal complexes thereof disclosed on pg. 3529.

9. Claims 19-20 and 30 are rejected under 35 U.S.C. § 102(b) as being anticipated by Schneider et al. See the acid salt compound 5 and the dimetal complexes thereof disclosed on pgs. 54-55.

10. Claims 19-20 are rejected under 35 U.S.C. § 102(b) as being anticipated by Yaouanc et al. See compounds 9 on pg. 207.

11. The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

> A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
>
> Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. § 103, the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant

is advised of the obligation under 37 C.F.R. § 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of potential 35 U.S.C. § 102(f) or (g) prior art under 35 U.S.C. § 103.

Claim(s) 6-17 and 25-41 are rejected under 35 U.S.C. § 103 as being unpatentable over WO 92/16494. WO '494 teaches a generic group of compounds which embraces applicant's claimed compounds. See Formula I at pg. 4, wherein a can be an alkylarylalkyl. These compounds are taught to be useful as anti-HIV agents to treat AIDS. See pg. 2. The claims differ from the reference by reciting specific species and/or a more limited subgenus than the reference. However, it would have been obvious to one having ordinary skill in the art at the time of the invention to select any of the species of the genus taught by the reference, including those instantly claimed, because the skilled chemist would have the reasonable expectation that any of the species of the genus would have similar properties and, thus, the same use as taught for the genus as a whole, i.e., as anti-HIV agents to treat AIDS. One having ordinary skill in the art would have been motivated to select the claimed compounds from the genus in the reference since such compounds would have been suggested by the reference as a whole. It has been held that a prior art disclosed genus of useful compounds is sufficient to render prima facie obvious a species falling within the genus. In re Susi, 440 F.2d 442, 445, 169 USPQ 423, 425 (CCPA 1971),

followed by the Federal Circuit in Merck & Co. v. Biocraft Laboratories, 874 F.2d 804, 10 USPQ 2d 1843, 1846 (Fed. Cir. 1989).

Claim(s) 11-15, 31-35 and 41 are rejected under 35 U.S.C. § 103 as being unpatentable over Rousseaux et al. Rousseaux et al teaches a generic group of compounds which embraces applicant's claimed compounds. See Formula I at Col. 1, wherein the W group in B is the group listed at Col. 3, lines 5-20, forming the bis compound and complexes thereof. Note that pharmaceutical compositions are disclosed at Col. 20, lines 56+. These compounds are taught to be useful as diagnostic therapeutic agents. See abstract. The claims differ from the reference by reciting specific species and/or a more limited subgenus than the reference. However, it would have been obvious to one having ordinary skill in the art at the time of the invention to select any of the species of the genus taught by the reference, including those instantly claimed, because the skilled chemist would have the reasonable expectation that any of the species of the genus would have similar properties and, thus, the same use as taught for the genus as a whole, i.e., as diagnostic therapeutic agents. One having ordinary skill in the art would have been motivated to select the claimed compounds from the genus in the reference since such compounds would have been suggested by the reference as a whole. It has been held that a

prior art disclosed genus of useful compounds is sufficient to render prima facie obvious a species falling within the genus. In re Susi, 440 F.2d 442, 445, 169 USPQ 423, 425 (CCPA 1971), followed by the Federal Circuit in Merck & Co. v. Biocraft Laboratories, 874 F.2d 804, 10 USPQ 2d 1843, 1846 (Fed. Cir. 1989).

Applicants' claim for benefit under 35 USC 119 to their GB application filed 12/16/91 is noted. Upon careful review, it is determined that claims 6-17, and 25-41 do not obtain said benefit under 35 USC 119 since said GB application fails to provide a proper written description of the instantly claimed compounds in accordance with 35 USC 112, 1st paragraph. Thus, the effective filing date for those claims is 12/16/92 which does not antedate the cited references.

12. Claims 42-44 are rejected under 35 U.S.C. § 102(b) as being anticipated by Schneider et al or Ciampolini et al. See Schneider at conversion of 1 to 5 on pg. 55. See Ciampolini at conversion of 7 to 5-6 on pg. 3528.

Claim(s) 42-45 are rejected under 35 U.S.C. § 103 as being unpatentable over Schneider et al or Ciampolini et al, each independently. The cited reference teaches a process for making bis-tetrazamacorcyclic compounds by reacting the polycyclic amines with a dihalo compound and deprotection of the nitrogens. See Schneider at pgs. 54-55 and Ciampolini at pg 3528. The

claims differ from the reference only by employing a new compound as the starting material, for the non-anticipated species of the instant claims. However, the instant and reference starting materials are analogous in that they are both polycyclic amines and dihalo compounds. One having ordinary skill in the art would have been motivated to employ the process of the reference with the expectation of obtaining the desired product because the skilled chemist would have expected the analogous starting materials to react similarly. It has been held that the application of an old process to a new and analogous starting material to obtain a result consistent with the teachings of the prior art would have been prima facie obvious to one having ordinary skill in the art. In re Larsen, 292 F.2d 531, 130 USPQ 209 (CCPA 1961); In re Durden, Jr., 763 F.2d 1406, 226 USPQ 359 (Fed. Cir. 1985).

13. Claims 4-5 and 21-24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Philip I. Datlow whose telephone number is (703) 308-4710.

PID

Philip I. Datlow
Patent Examiner
Group 1200-Art Unit 1202